

MINERVA LECTURES: Making Sense of the Coronavirus Crisis: The Science of the Virus

By Wiktoria Lassak

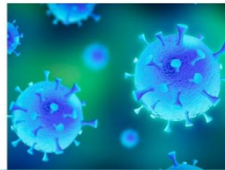


Making sense of the Coronavirus Crisis
– The Science of the Virus

Chaired by Professor Brad Evans
with: Dr Andrew Prestitch, Department of Biology & Biochemistry
Dr Ben Altworth, Department of Psychology
Dr Asel Sartbaeva, Department of Chemistry

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Friday 29 May 2020 at 14:00
Online



World crisis. A threat to the health of society and economy. COVID-19 has already reached almost all corners of the Earth, leaving behind terrible losses. Many countries showed death rates discrepancy, which was probably associated with their general preparation for a pandemic outbreak, the speed of introduction of restrictions, their assimilation by society and the cultural background of each of them. But how did this affect us? How are we trying to save ourselves? What is this really about?

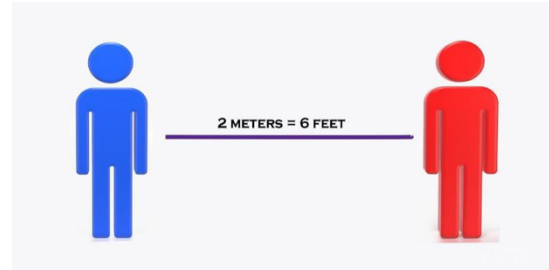
The coronavirus we know is a pathogen that attacks the human respiratory system. It is manifested by worsening cough, fever and fatigue. Contrary to appearances, it is very easy to mistake it for the common cold. An infected person spreads the disease to others through droplets in the breath. To get infected, we would simply have to be close to the sick person or touch the contaminated surface. Then, by bringing our hands to the face, nose or mouth, we would move the virus to our own respiratory tract. Prevention includes frequent hand washing with soap and warm water, isolation, social distancing as well as wearing a covering of the nose and mouth, e.g. with masks. Dr Andrew Preston reminds us that our resources of these items may run out, but they are very useful in terms of infection control, stopping the droplets to spread around. Moreover, it is important not to lose vigilance and remember that if we are already infected, applying the mask only traps the virus inside. An additional idea is to create the 'Track & Trace' application, which would have the task of maintaining social distancing and other protective behaviours only for infected people.



The hope of developing resistance to COVID-19 is to invent a vaccine containing parts of the virus. After their introduction to the body, the immune system will produce antibodies to fight the pathogen, eventually developing the memory response. Currently, about six vaccines are at the clinical trials stage, mainly in China and the USA. We owe such quick response to the considerable commitment of governments of rich countries, a huge amount of money invested for that purpose, as well as the incredible mobilization of scientists and medics around the world. Although we try to stay positive, we need to remember that the difficulty of inventing an effective vaccine is not over. According to Dr Asel Sartbaeva, when this success is achieved, we will have to transport in a short time a huge number of samples

to a huge number of people on a huge surface while maintaining special conditions of transport using the cold chain. This will definitely be a challenge. Key workers and doctors will be vaccinated first, followed by the most vulnerable people, and only then the rest of the society, including children.

It seems to me that, according to our conscience, we can all see the changes that have taken place in the whole of society. Of course, many behavioural changes have been imposed top-down by the government to prevent the spread of the virus, which would directly affect our sense of security. However, it was up to us to comply with them.



From us, it required discipline and staying alert. People needed a clear message and personalised advice supported by evidence. Facilitating changes of small behaviours of individuals, such as not touching one's face, turned out to be much more sustainable than engaging in big changes, such as closing schools. We needed to be pushed in the right direction using low costs and obtaining high benefits. This global crisis is a great tragedy for many, that's for sure, but I believe we can learn from it and create united global society for the future.

During this pandemic, that is not even over yet, world society strengthened its trust towards science. In 'post-COVID' time we will need to continue spreading awareness of what happened and keep making steps forward in the dialogue with the scientists concerning this case. We shall respect the possibilities they give us, stay honest, but also keep in mind that not all of the questions we ask can be easily answered. It is about giving advice and interpreting data. As the society, we cannot forget what happened, but take out of this experience as much as possible to be prepared for what the future brings for us.